THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 89 of Kingfisher County, a/k/a Cashion Public Schools (Cashion).

1. Purpose: Francis Tuttle and Edmond desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Cashion students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Cashion. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Cashion and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 5/13, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Cashion Board of Education on 4/13, 2015.

Mr. Sammy Jackson, Superintendent
Cashion Public Schools
101 N Euclid
Cashion, OK 73016

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is available at www.pltw.org.

Introduction to Computer Science
ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering
Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications
CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling
In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence
AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity
SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving
As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I
This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II
Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

ATTACHMENT 2

APPLICATION AND ENROLLMENT INFORMATION

About the Computer Science Academy

The Computer Science Academy offers students a broad understanding of the computer science field as well as rigorous science and math courses.

School Day Structure

Students attend one-half of the school day (either morning or afternoon) at their high school and the other one-half of the day at Francis Tuttle's Rockwell Campus. Transportation is provided between Francis Tuttle and the student's high school.

Extracurricular Activities

In addition to activities at the home high school, Academy students are members of the Business Professionals of America Organization (BPA). This national student organization provides opportunities for students to participate in leadership activities, competitions, and additional learning activities. Membership dues are paid by Francis Tuttle. Participation is encouraged, but is not required.

Student Qualifications

Selection criteria will be developed to identify qualifying students. Candidates must be at least of sophomore status before starting in the Academy.

Enrollment Procedures

1. Applications are available to interested students through the high school counselors.

2. High School counselors verify eligibility and attach pertinent school records including transcripts and any standardized test scores.

3. High School counselors and math/science teachers are requested to provide references for the student applications submitted and make recommendations to the Academy staff.

4. Recommended candidates and their parents will be contacted for a personal interview at Francis Tuttle's Rockwell Campus.

5. Francis Tuttle will review all the applications to determine who will be selected for enrollment.

6. Selected candidates begin courses at the Academy in August.

MEMORANDUM OF UNDERSTANDING
BETWEEN
FRANCIS TUTTLE TECHNOLOGY CENTER
AND
CRESCENT PUBLIC SCHOOLS

This Memorandum of Understanding (Agreement) is entered into by and between Francis Tuttle Technology Center School District No. 21 (Francis Tuttle) and Crescent Public School District No. 42-I002 (Crescent).

PURPOSE

Francis Tuttle and Crescent desire to enter into an Agreement pursuant to 70 O.S. 5-117(C) in order to locate and operate a Gateway to Technology (GTT) Program on-site at Crescent Middle School.

TERM

This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Crescent and shall continue in effect until June 30, 2016. This Agreement may be renewed by the parties for subsequent fiscal years upon the mutual ratification of the Agreement by each school's Board of Education. A party may determine to non-renew or terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination or non-renewal to the other party.

PROGRAMS

It is the intention of the parties to establish a Gateway to Technology (GTT) Program to be operated on site at the Crescent Middle School. The program will be offered as a two semester, one hour class. This program is available to 6th, 7th and 8th grade students and will consist of 2 one-hour sections per grade level.

This Program requires one full-time instructor.

PERSONNEL

Francis Tuttle is responsible for the hiring, employing, compensating, and evaluating of the following personnel:

(1) Full-Time GTT Instructor

Supervision of the instructor will be a cooperative effort between Francis Tuttle and Crescent.

TECHNOLOGY, FURNITURE AND OTHER MATERIALS

Francis Tuttle will provide all needed furniture, fixtures and equipment for the identified collaborative classrooms.

Francis Tuttle will provide all curriculum materials and consumable supplies for the GTT program.

Francis Tuttle will provide the technical staff to provide hardware support services on PCs in the appropriate classrooms and will collaborate with Crescent personnel on PC imaging requirements. Francis Tuttle will serve as a resource for technical support of computers, networks and other technology related items as required by Crescent personnel.

Crescent will provide adequate classroom space and electrical supply for proposed program.

Crescent will enroll students and grant credit to students who successfully complete the program.

Crescent will provide reasonable access to classrooms for Francis Tuttle personnel and contractors in order to prepare the classrooms for instruction.

Francis Tuttle and Crescent will collaboratively provide technical staff that will be responsible for the network connection and software image on each PC and to provide necessary help desk and work order processing.

CONSTRUCTION/REMODELING COSTS

Francis Tuttle will assist in remodeling costs associated with implementation of GTT Program at Crescent Middle School. Francis Tuttle will reimburse Crescent an amount not to exceed $75,000 (Seventy Five Thousand Dollars) for costs associated with classroom remodel and cabling.

MISCELLANEOUS

Francis Tuttle and Crescent administrators will collaborate on all operational matters related to the Career Tech Program. An "Operational Statement of Understanding" will be developed prior to the start of the program and will become part of this Agreement as Attachment A.

This Agreement may only be modified or amended in writing by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on March 9 2015

Dr. Tom Friedemann
Superintendent
Francis Tuttle Technology Center
127777 N. Rockwell
Oklahoma City, OK 73142

Approved by the Crescent Board of Education on April 6 2015

Mr. Butch Gee
Superintendent
Crescent Public Schools
106 N. Magnolia
Crescent, OK 73028

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 42 of Logan County, a/k/a Crescent Public Schools (Crescent).

1. Purpose: Francis Tuttle and Edmond desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Crescent students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Crescent. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Crescent and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/13, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Crescent Board of Education on 4-6, 2015.

Mr. H.T. Gee, Superintendent
Crescent Public Schools
P.O. Box 719
Crescent, OK 73028

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is available at www.pltw.org.

Introduction to Computer Science

ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering

Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications

CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling

In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence
AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity
SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving
As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I
This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II
Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 06 of Oklahoma County, a/k/a Deer Creek Public Schools (Deer Creek).

1. Purpose: Francis Tuttle and Edmond desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Deer Creek students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Deer Creek. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Deer Creek and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/13, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Deer Creek Board of Education on April 13, 2015.

Mrs. Ranet Tippens, Superintendent
Deer Creek Public Schools
20701 N. MacArthur Blvd.
Edmond, OK 73012

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is available at www.pltw.org.

Introduction to Computer Science
ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering
Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications
CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling
In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence
AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity
SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving
As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I
This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II
Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

ATTACHMENT 2

APPLICATION AND ENROLLMENT INFORMATION

About the Computer Science Academy

The Computer Science Academy offers students a broad understanding of the computer science field as well as rigorous science and math courses.

School Day Structure

Students attend one-half of the school day (either morning or afternoon) at their high school and the other one-half of the day at Francis Tuttle's Rockwell Campus. Transportation is provided between Francis Tuttle and the student's high school.

Extracurricular Activities

In addition to activities at the home high school, Academy students are members of the Business Professionals of America Organization (BPA). This national student organization provides opportunities for students to participate in leadership activities, competitions, and additional learning activities. Membership dues are paid by Francis Tuttle. Participation is encouraged, but is not required.

Student Qualifications

Selection criteria will be developed to identify qualifying students. Candidates must be at least of sophomore status before starting in the Academy.

Enrollment Procedures

1. Applications are available to interested students through the high school counselors.

2. High School counselors verify eligibility and attach pertinent school records including transcripts and any standardized test scores.

3. High School counselors and math/science teachers are requested to provide references for the student applications submitted and make recommendations to the Academy staff.

4. Recommended candidates and their parents will be contacted for a personal interview at Francis Tuttle's Rockwell Campus.

5. Francis Tuttle will review all the applications to determine who will be selected for enrollment.

6. Selected candidates begin courses at the Academy in August.

ATTACHMENT 2

APPLICATION AND ENROLLMENT INFORMATION

About the Computer Science Academy

The Computer Science Academy offers students a broad understanding of the computer science field as well as rigorous science and math courses.

School Day Structure

Students attend one-half of the school day (either morning or afternoon) at their high school and the other one-half of the day at Francis Tuttle's Rockwell Campus. Transportation is provided between Francis Tuttle and the student's high school.

Extracurricular Activities

In addition to activities at the home high school, Academy students are members of the Business Professionals of America Organization (BPA). This national student organization provides opportunities for students to participate in leadership activities, competitions, and additional learning activities. Membership dues are paid by Francis Tuttle. Participation is encouraged, but is not required.

Student Qualifications

Selection criteria will be developed to identify qualifying students. Candidates must be at least of sophomore status before starting in the Academy.

Enrollment Procedures

1. Applications are available to interested students through the high school counselors.

2. High School counselors verify eligibility and attach pertinent school records including transcripts and any standardized test scores.

3. High School counselors and math/science teachers are requested to provide references for the student applications submitted and make recommendations to the Academy staff.

4. Recommended candidates and their parents will be contacted for a personal interview at Francis Tuttle's Rockwell Campus.

5. Francis Tuttle will review all the applications to determine who will be selected for enrollment.

6. Selected candidates begin courses at the Academy in August.

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 12 of Oklahoma County, a/k/a Edmond Public Schools (Edmond).

1. Purpose: Francis Tuttle and Edmond desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Edmond students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Edmond. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Edmond and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/23, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Edmond Board of Education on 4/6, 2015.

Dr. David Goin, Superintendent
Edmond Public Schools
1001 West Danforth Road
Edmond, OK 73003-4801

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is available at www.pltw.org.

Introduction to Computer Science

ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering

Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications

CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling

In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence

AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity

SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving

As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I

This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II

Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 12 of Oklahoma County, a/k/a Edmond Public Schools (Edmond).

1. Purpose: Francis Tuttle and Edmond desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Edmond students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Edmond. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Edmond and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/23, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Edmond Board of Education on 4/6, 2015.

Dr. David Goin, Superintendent
Edmond Public Schools
1001 West Danforth Road
Edmond, OK 73003-4801

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is available at www.pltw.org.

Introduction to Computer Science
ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering
Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications
CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling
In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence
AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity
SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving
As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I
This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II
Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 37 of Oklahoma County, a/k/a Millwood Public Schools (Millwood).

1. Purpose: Francis Tuttle and Edmond desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Millwood students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Millwood. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Millwood and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/13, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Millwood Board of Education on 4-6, 2015.

Ms. Cecilia J. Robinson, Superintendent
Millwood Public Schools
6724 Martin Luther King Avenue
Oklahoma City, OK 73111-7995

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 37 of Oklahoma County, a/k/a Millwood Public Schools (Millwood).

1. Purpose: Francis Tuttle and Edmond desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Millwood students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Millwood. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Millwood and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/13, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Millwood Board of Education on 4-6, 2015.

Ms. Cecilia J. Robinson, Superintendent
Millwood Public Schools
6724 Martin Luther King Avenue
Oklahoma City, OK 73111-7995

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is available at www.pltw.org.

Introduction to Computer Science

ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering

Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications

CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling

In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence
AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity
SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving
As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I
This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II
Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

ATTACHMENT 2

APPLICATION AND ENROLLMENT INFORMATION

About the Computer Science Academy

The Computer Science Academy offers students a broad understanding of the computer science field as well as rigorous science and math courses.

School Day Structure

Students attend one-half of the school day (either morning or afternoon) at their high school and the other one-half of the day at Francis Tuttle's Rockwell Campus. Transportation is provided between Francis Tuttle and the student's high school.

Extracurricular Activities

In addition to activities at the home high school, Academy students are members of the Business Professionals of America Organization (BPA). This national student organization provides opportunities for students to participate in leadership activities, competitions, and additional learning activities. Membership dues are paid by Francis Tuttle. Participation is encouraged, but is not required.

Student Qualifications

Selection criteria will be developed to identify qualifying students. Candidates must be at least of sophomore status before starting in the Academy.

Enrollment Procedures

1. Applications are available to interested students through the high school counselors.
2. High School counselors verify eligibility and attach pertinent school records including transcripts and any standardized test scores.
3. High School counselors and math/science teachers are requested to provide references for the student applications submitted and make recommendations to the Academy staff.
4. Recommended candidates and their parents will be contacted for a personal interview at Francis Tuttle's Rockwell Campus.
5. Francis Tuttle will review all the applications to determine who will be selected for enrollment.
6. Selected candidates begin courses at the Academy in August.

ATTACHMENT 2

APPLICATION AND ENROLLMENT INFORMATION

About the Computer Science Academy

The Computer Science Academy offers students a broad understanding of the computer science field as well as rigorous science and math courses.

School Day Structure

Students attend one-half of the school day (either morning or afternoon) at their high school and the other one-half of the day at Francis Tuttle's Rockwell Campus. Transportation is provided between Francis Tuttle and the student's high school.

Extracurricular Activities

In addition to activities at the home high school, Academy students are members of the Business Professionals of America Organization (BPA). This national student organization provides opportunities for students to participate in leadership activities, competitions, and additional learning activities. Membership dues are paid by Francis Tuttle. Participation is encouraged, but is not required.

Student Qualifications

Selection criteria will be developed to identify qualifying students. Candidates must be at least of sophomore status before starting in the Academy.

Enrollment Procedures

1. Applications are available to interested students through the high school counselors.

2. High School counselors verify eligibility and attach pertinent school records including transcripts and any standardized test scores.

3. High School counselors and math/science teachers are requested to provide references for the student applications submitted and make recommendations to the Academy staff.

4. Recommended candidates and their parents will be contacted for a personal interview at Francis Tuttle's Rockwell Campus.

5. Francis Tuttle will review all the applications to determine who will be selected for enrollment.

6. Selected candidates begin courses at the Academy in August.

BOARD APPROVED
APR 06 2015

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 01 of Oklahoma County, a/k/a Putnam City Public Schools (Putnam City).

1. Purpose: Francis Tuttle and Putnam City desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Putnam City students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Putnam City. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Putnam City and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/13, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Putnam City Board of Education on 4/6, 2015.

Dr. Fred Rhodes, Superintendent
Putnam City Public Schools
5401 N.W. 40th
Oklahoma City, OK 73122

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is avallable at www.pltw.org.

Introduction to Computer Science

ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering

Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications

CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling

In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence
AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity
SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving
As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I
This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II
Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

ATTACHMENT 2

APPLICATION AND ENROLLMENT INFORMATION

About the Computer Science Academy

The Computer Science Academy offers students a broad understanding of the computer science field as well as rigorous science and math courses.

School Day Structure

Students attend one-half of the school day (either morning or afternoon) at their high school and the other one-half of the day at Francis Tuttle's Rockwell Campus. Transportation is provided between Francis Tuttle and the student's high school.

Extracurricular Activities

In addition to activities at the home high school, Academy students are members of the Business Professionals of America Organization (BPA). This national student organization provides opportunities for students to participate in leadership activities, competitions, and additional learning activities. Membership dues are paid by Francis Tuttle. Participation is encouraged, but is not required.

Student Qualifications

Selection criteria will be developed to identify qualifying students. Candidates must be at least of sophomore status before starting in the Academy.

Enrollment Procedures

1. Applications are available to interested students through the high school counselors.

2. High School counselors verify eligibility and attach pertinent school records including transcripts and any standardized test scores.

3. High School counselors and math/science teachers are requested to provide references for the student applications submitted and make recommendations to the Academy staff.

4. Recommended candidates and their parents will be contacted for a personal interview at Francis Tuttle's Rockwell Campus.

5. Francis Tuttle will review all the applications to determine who will be selected for enrollment.

6. Selected candidates begin courses at the Academy in August.

BOARD APPROVED
APR 06 2015

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 01 of Oklahoma County, a/k/a Putnam City Public Schools (Putnam City).

1. Purpose: Francis Tuttle and Putnam City desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Putnam City students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Putnam City. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Putnam City and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/13, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Putnam City Board of Education on 4/6, 2015.

Dr. Fred Rhodes, Superintendent
Putnam City Public Schools
5401 N.W. 40th
Oklahoma City, OK 73122

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is available at www.pltw.org.

Introduction to Computer Science
ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering
Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications
CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling
In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence

AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity

SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving

As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I

This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II

Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

ATTACHMENT 2

APPLICATION AND ENROLLMENT INFORMATION

About the Computer Science Academy

The Computer Science Academy offers students a broad understanding of the computer science field as well as rigorous science and math courses.

School Day Structure

Students attend one-half of the school day (either morning or afternoon) at their high school and the other one-half of the day at Francis Tuttle's Rockwell Campus. Transportation is provided between Francis Tuttle and the student's high school.

Extracurricular Activities

In addition to activities at the home high school, Academy students are members of the Business Professionals of America Organization (BPA). This national student organization provides opportunities for students to participate in leadership activities, competitions, and additional learning activities. Membership dues are paid by Francis Tuttle. Participation is encouraged, but is not required.

Student Qualifications

Selection criteria will be developed to identify qualifying students. Candidates must be at least of sophomore status before starting in the Academy.

Enrollment Procedures

1. Applications are available to interested students through the high school counselors.

2. High School counselors verify eligibility and attach pertinent school records including transcripts and any standardized test scores.

3. High School counselors and math/science teachers are requested to provide references for the student applications submitted and make recommendations to the Academy staff.

4. Recommended candidates and their parents will be contacted for a personal interview at Francis Tuttle's Rockwell Campus.

5. Francis Tuttle will review all the applications to determine who will be selected for enrollment.

6. Selected candidates begin courses at the Academy in August.

THE COMPUTER SCIENCE ACADEMY
JOINT PROGRAM AGREEMENT
FISCAL YEAR 2016

This Joint Program Agreement ("Agreement") is entered by and between Francis Tuttle Technology Center District No. 21 ("Francis Tuttle") and Independent School District No. 41 of Oklahoma County, a/k/a Western Heights Public Schools (Western Heights).

1. Purpose: Francis Tuttle and Western Heights desire to enter into a joint program, pursuant to 70 O.S. §5-117(C), in order to provide The Computer Science Academy to Western Heights students.

2. Term: This Agreement shall become effective when approved by the Boards of Education of Francis Tuttle and Western Heights. A party may determine to terminate the Agreement at the end of the fiscal year and shall provide written notification of such termination to the other party.

3. Program: It is the parties' intention to participate in The Computer Science Academy ("Academy") which will provide an opportunity for sophomores, juniors, and seniors to attend the Academy to be located at Francis Tuttle's Rockwell Campus for the purpose of taking classes in math, science, and computer sciences. Attachment 1 shall designate the grades of students and courses to be taught as well as potential plans of study.

4. Students: Students shall be enrolled in Western Heights and Francis Tuttle jointly. Students who are admitted to the Academy will be required to follow Francis Tuttle's behavior and conduct policies.

5. Location: The Academy shall be located in Francis Tuttle's Rockwell Campus, located at 12777 N. Rockwell, Oklahoma City, Oklahoma 73142. Francis Tuttle shall provide the necessary classroom space and classroom equipment for the Academy.

6. Miscellaneous: This Agreement, including Attachments 1 and 2, shall constitute the entire Agreement of the parties. This Agreement may only be modified or amended in writing signed by both parties. This Agreement shall be subject to and interpreted according to Oklahoma law.

Approved by the Francis Tuttle Board of Education on 3/13, 2015.

Dr. Tom Friedemann, Superintendent
Francis Tuttle Technology Center
12777 N. Rockwell Avenue
Oklahoma City, OK 73142

Approved by the Western Heights Board of Education on 13 April, 2015.

Mr. Joe Kitchens, Superintendent
Western Heights Public Schools
8401 S.W. 44th
Oklahoma City, OK 73179

ATTACHMENT 1

THE COMPUTER SCIENCE ACADEMY
PLAN OF STUDY AND COURSE DESCRIPTIONS

HS YEAR	COMPUTER SCIENCE UNIT	MATHEMATICS	SCIENCE
Sophomore	Computer Science & Software Engineering: Programming I	Pre-AP Geometry Pre-AP Algebra II	Pre-AP Physics
Junior	Introduction to Computer Science Computer Science Applications: Programming II	Pre-AP Algebra II; Pre-AP-Trig Pre-AP Calculus	Pre-AP or AP Physics
Senior	Artificial Intelligence Cybersecurity Computational Problem Solving	Pre-AP Trig Pre-AP Calculus AP Calculus AB/BC	Pre-AP or AP Physics

*Note: Not every course is offered every year, especially AP math and science courses.

COMPUTER SCIENCE COURSE DESCRIPTIONS

Some of the computer science courses have been developed, in conjunction with higher education and industry, by Project Lead the Way (PLTW), a non-profit organization. Additional information about PLTW is available at www.pltw.org.

Introduction to Computer Science

ICS is a starting point for the Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

Computer Science and Software Engineering

Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation.

Computer Science Applications

CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test.

Simulation and Modeling

In SAM, students create models and simulate social, physical, and biological systems. Students apply statistics and data analysis to understand systems and predict behavior, and they compare models to complex, real data. Students create simulations to communicate central ideas in the physical, biological, and social sciences and deepen their understanding of concepts in discrete math and computer science. This course emphasizes collaboration, professional writing, and the scientific method.

Artificial Intelligence
AI students will develop artificially intelligent systems that create solutions to real problems found in science and industry. Students analyze problems for computational difficulty and analyze solutions for computational efficiency. Students engage in a wide array of applications, including automated vehicles and computer vision.

Cybersecurity
SEC introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in SEC, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Capstone Course: Computational Problem Solving
As a capstone course, CPS offers students the opportunity to work in a team to deliver a software solution to a real-world design problem. Teams start by defining problems, which might originate from CPS students, community, or industry clients, or students in other problem-based courses, and use the Agile design process to develop a software solution. Effective practices in problem solving, documentation, software development, presentation, and collaboration are central to the course.

Programming I
This course is designed to provide students with learning experiences to employ the concepts of object oriented programming to develop applications in the Java programming language. Such concepts as advanced program development tools, console/graphic user interfaces, and event/exception handling are introduced.

Programming II
Students will use C# to create event-driven programs, and expand their knowledge of C# as used in business applications both for Windows and for the Web.

ATTACHMENT 2

APPLICATION AND ENROLLMENT INFORMATION

About the Computer Science Academy

The Computer Science Academy offers students a broad understanding of the computer science field as well as rigorous science and math courses.

School Day Structure

Students attend one-half of the school day (either morning or afternoon) at their high school and the other one-half of the day at Francis Tuttle's Rockwell Campus. Transportation is provided between Francis Tuttle and the student's high school.

Extracurricular Activities

In addition to activities at the home high school, Academy students are members of the Business Professionals of America Organization (BPA). This national student organization provides opportunities for students to participate in leadership activities, competitions, and additional learning activities. Membership dues are paid by Francis Tuttle. Participation is encouraged, but is not required.

Student Qualifications

Selection criteria will be developed to identify qualifying students. Candidates must be at least of sophomore status before starting in the Academy.

Enrollment Procedures

1. Applications are available to interested students through the high school counselors.
2. High School counselors verify eligibility and attach pertinent school records including transcripts and any standardized test scores.
3. High School counselors and math/science teachers are requested to provide references for the student applications submitted and make recommendations to the Academy staff.
4. Recommended candidates and their parents will be contacted for a personal interview at Francis Tuttle's Rockwell Campus.
5. Francis Tuttle will review all the applications to determine who will be selected for enrollment.
6. Selected candidates begin courses at the Academy in August.